

Technical Support Document

ACTION: Identification of Crittenden County, Arkansas as a Zone Targeted for Economic Development

SUMMARY OF ACTION: The Arkansas Department of Environmental Quality (ADEQ) submitted a request on September 28, 2005, to EPA to identify Crittenden County as an economic development zone (EDZ) under Section 173(a)(1)(B) of the Clean Air Act (CAA). Crittenden County, Arkansas is one of two counties that makeup the Memphis 8-Hour Ozone Nonattainment Area.

Section 173(a)(1)(B) of the Clean Air Act authorizes EPA to identify, in consultation with the Secretary of HUD, zones within non-attainment areas which should be targeted for economic development. A new or modified major stationary source located in an EDZ is relieved of the New Source Review (NSR) requirement to obtain offsets if (1) the State Implementation Plan (SIP) includes an NSR nonattainment program that has established emission levels for new and modified major sources ("growth allowance") in such EDZ, and (2) emissions from the new or modified stationary source will not cause or contribute to emission levels that exceed the growth allowance. The growth allowance must be consistent with the achievement of reasonable further progress and must not interfere with attainment of the applicable National Ambient Air Quality Standard (NAAQS) by the applicable attainment date for the nonattainment area.

TECHNICAL REVIEW:

1. Crittenden County is located in a designated 8-hour ozone nonattainment area which satisfies the statutory requirement of Section 173(a)(1)(B) that the zone be established in a non-attainment area;
2. As required by Section 173(a)(1)(B), EPA consulted with the designee of the Secretary of Department of Housing and Urban Development (HUD). The Secretary's designee provided EPA with poverty and unemployment data for Crittenden County. A summary of relevant data provided by HUD and ADEQ follows:
 - The overall average poverty rate for Crittenden County is 25.33% based on 2000 U.S. Census Data (50,081 persons in the county with 12,688 persons in poverty) which is over twice the national poverty rate of 11.8%;
 - Ten of the sixteen census tracts in Crittenden County have poverty rates greater than 25% with nine of the sixteen census tracts having poverty rates greater than 30%, and six of the sixteen census tracts have poverty rates greater than 40%;
 - Unemployment rates in Crittenden County have been above the national average rate over the past four years based upon data provided by the ADEQ. The

current projected unemployment rate based on U.S. Department of Labor Statistics data for October 2005 in the Memphis area (which includes Crittenden County) is 5.9%, while the national rate of unemployment in October 2005 was 4.6%.

- Of the 474 eight-hour ozone nonattainment counties, Crittenden County ranks 446th in per capita personal income, and it is only one of eleven nonattainment counties with an overall average poverty rate greater than 20% based on poverty data provided by ADEQ.

3. HUD also compared census tract-level poverty data for Crittenden County with qualifying criteria for various competitive economic development programs implemented by HUD, namely the Urban and Rural Empowerment Zones and Renewal Communities (EZ/RC) programs. The EZ/RC programs are designed to provide highly targeted funding to specific in-need areas, using census tract criteria for program qualification. HUD concluded that while a significant portion of the county exhibits pervasive poverty, Crittenden County, when taken as a whole does not appear to meet HUD's qualifying criteria for pervasive poverty under the EZ/RC programs. HUD also communicated to EPA that their statements of fact relating to their program criteria should not be interpreted as limiting EPA's ability to base the CAA EDZ program on broader scale measures of poverty, or other criteria.

EPA reviewed information HUD provided during the consultation. We also compared the purpose of HUD's programs with the legislative intent and statutory goals of section 173 (a)(1)(B) of the CAA. We noted that applicants to HUD's EZ/RC programs may restrict the applicable geographic area to only those with high poverty rates, while EPA's nonattainment designations apply to entire counties in order to facilitate state, county, and local air quality planning. We also noted that HUD's evaluations are based on applications from State and local governments competing for federal development grants. The CAA EDZ provisions, in contrast, are intended to provide States with an opportunity to facilitate development within a defined area without compromising efforts to reach attainment of the NAAQS. HUD also reviews applications from all areas of the country, while EDZ designations are limited to nonattainment areas, which may present a different poverty profile than the nation as a whole. Our review of the socio-economic data indicates that Crittenden County is an appropriate candidate to identify as a zone targeted for economic development under the CAA.

4. The ADEQ submitted a strategic plan for Crittenden County, the proposed EDZ. The plan details ADEQ's goals to promote economic opportunity for the citizens of Crittenden County and discusses the available community infrastructure necessary to promote sustainable economic development in the area. ADEQ's request is also a

collaborative effort with Shelby County, Tennessee, which is also in the Memphis 8-Hour Ozone Nonattainment Area.

5. Arkansas provided ozone air quality modeling for the entire Memphis 8-Hour Ozone Nonattainment Area and draft Arkansas New Source Review (NSR) permitting regulations to implement pre-construction permit application review for new and modified major stationary sources in the proposed EDZ. Air quality modeling, using the variable-grid Urban Airshed Model, Version 1.5 (UAM-V5), a regional- and urban-scale, nested-grid photochemical air quality model, was used to demonstrate compliance with the 8-hour ozone NAAQS in future years. The EDZ air quality modeling was developed using previous Early Action Compact modeling developed for the Memphis area that was consistent with the EPA draft modeling guidance that was available when the modeling was conducted.

The modeling simulated and assessed future-year (2007 and 2009) ozone air quality for the Memphis Nonattainment area and surrounding counties. Compliance with the 8-hour ozone NAAQS is demonstrated at each monitor in the Memphis nonattainment area and in unmonitored areas of the local monitoring domain. Attainment of the 8-hour ozone NAAQS is predicted by the modeling to be achieved in 2007 and 2009. Additionally, Arkansas analyzed the impacts from hypothetical new industrial source emissions in the Crittenden County EDZ. When additional emissions from hypothetical EDZ sources are added into the modeling for the 2007 and 2009 periods, the future year design values indicate that the Memphis Nonattainment Area and surrounding counties will continue to attain the ozone NAAQS.

Arkansas also included a 2009 modeling scenario with ancillary growth emissions to estimate the effects of additional emissions growth (in addition to the hypothetical industrial facilities placed at the Port Site and Supersite). The ancillary growth estimate was to simulate the effects of growth in other sectors (e.g., population, minor sources, and transportation) that may result from the development of the hypothetical industrial facilities. This modeling scenario also indicated the area would continue to attain the NAAQS in 2009.

Arkansas also included some analyses estimating the greatest increase in simulated maximum 8-hour ozone concentration (for each county or the multi-county area) resulting due to the increase in emissions at the Port Site in 2007 and both the Supersite and the Port Site emission increase in 2009. At this time EPA has not issued policy or guidance on single source ozone modeling impacts for a significant impact level analysis. Several issues need to be addressed with this type of modeling which include but are not limited to ozone impacts and what level of impact by a single source is significant or insignificant.

EPA has conducted this preliminary review based on whether the Future Design Values and the out-of-network test for the remaining nonattainment area and immediately surrounding counties indicate attainment or nonattainment.

In summary, the Arkansas modeling indicates that the emissions quantified as growth allowances in 2007 and 2009 (including ancillary growth in 2009) for the EDZ will be consistent with the achievement of reasonable further progress and will not interfere with attainment of the applicable NAAQS. A more detailed discussion of the Crittenden County EDZ modeling is included in the application submitted to EPA.

The draft NSR permitting regulations propose a growth allowance based on the modeling that limits emissions in the Crittenden County EDZ from new and modified major stationary sources which will not be required to obtain offsets. The ozone air quality modeling and draft permitting regulations in the EDZ request limit the growth allowance to the following:

- 1900 tons per year (5.3 tons per day) or less of volatile organic compounds, 300 tons per year (0.93 tons per day) or less of nitrogen oxides, and 277 tons per year (0.76 tons per day) or less of carbon monoxide beginning January 1, 2007; and
- 3700 tons per year or less of volatile organic compounds, 800 tons per year or less of nitrogen oxides, and 833 tons per year (2.28 tons per day) or less of carbon monoxide beginning January 1, 2009 (all of these allocations include ancillary emissions).

The requirement to obtain offsets for all new and modified sources subject to NSR permitting requirements in Crittenden County remains in effect until Arkansas adopts NSR program regulations for the zone and EPA approves the revision of Arkansas' State Implementation Plan (SIP) to include such regulations. The SIP regulations that Arkansas will develop must demonstrate that the emissions quantified for this purpose are consistent with the achievement of reasonable further progress and do not interfere with attainment of the NAAQS within the Memphis 8-Hour Ozone Nonattainment Area. The State rulemaking and SIP approval process will provide the public an opportunity to participate in the process of designing implementing regulations for the zone.

If the Memphis nonattainment area does not attain the 8-hour ozone NAAQS by June 15, 2007, emissions from the growth allowance or cap established for the EDZ must be included in any subsequent SIP revision and modeling demonstration. When the Memphis nonattainment area does attain the ozone NAAQS and is redesignated to attainment, the EDZ will no longer apply.

ADEQ should provide EPA an annual report that lists and describes local and state actions taken in accordance with the Crittenden County EDZ strategic plan submitted to EPA. The report should include both quantitative and qualitative analysis regarding the economic and air quality accomplishments in Crittenden County. ADEQ has offered to report to EPA in their strategic plan.

RECOMMENDATION: EPA typically manages attainment of national ambient air quality standards in airsheds based on county-level building blocks. Therefore, it seems reasonable to assess the identification of a CAA EDZ at the county level, consistent with ADEQ's request. Based upon (1) the county level socio-economic data reviewed by EPA; (2) the area-wide ozone air quality modeling and draft NSR permitting regulations for the zone submitted by ADEQ; and (3) after consultation with the Secretary of Housing and Urban Development (HUD), it is recommended that Crittenden County, Arkansas in the Memphis Ozone Nonattainment Area be identified as an economic development zone (EDZ) under section 173(a)(1)(B) of the CAA. The practicable implementation of an EDZ in Crittenden County will be contingent upon ADEQ's

adoption and EPA's SIP approval of final NSR regulations for managing an appropriate growth allowance in the EDZ.

Reviewed by: Jeff Robinson
Signature: /s/
Date: 01/18/06